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Private Sector Deposits and Performance of Deposit Money Banks in Nigeria

Takon Samuel Manyo[1], Aderigha Ades George[2], Friday Ojeaburu[3]

[1]Department of banking and finance, University of Calabar, Calabar.

[2]Department of banking and finance, Imo State University Owerri Imo State

[3]Ignatius Ajuru University of Education, Rivers State

ABSTRACT: This paper critically considered the relationship amid private sector deposits and the performance of deposit money banks in Nigeria for the period 1990-2019. Private Sector Deposits was proxied by demand deposits, Deposit Savings and time deposits, while Performance was proxied by Return on Assets of all deposit money banks in Nigeria for the period reviewed. Secondary data was obtained from the website of Central Bank of Nigeria statistical bulletin and the website of Nigerian Deposit Insurance Corporation (NDIC). We conducted Pretest using Augmented Dickey- fuller (ADF) test statistic to test for unit root. A mix order of integration was observed. The ARDL was thereafter used to estimate the equation, while the bounds test result showed the long run relationship. The short run result revealed negative relationship at some lag periods, and there was no significant relationship amid private sector deposits and Performance of deposit money banks in Nigeria. The bounds test results showed a weak long run relationship amid the variables. These results has so far exposed the fact that private sector funds such as demand deposits, savings deposits, time deposits with Deposit Money Banks in Nigeria do not significantly influence performance the performance of the DMBs except they are used for investment decisions. The study concludes and recommends that, (1) Demand deposits, Savings deposits and time deposits in the custody of DMBs should not be kept unutilized. (2) At long run period, demand deposits, savings deposits, and time deposits should be invested on investment options that would yield positive return on investments. (3) The Central Bank of Nigeria should regulate the level of depositories in the custody of DMBs in Nigeria to ensure sustained financial stability in Nigeria.

KEYWORDS: Private Sector deposits, Performance, Return on Assets, Demand Deposit, and Savings deposits, time deposits.

1. INTRODUCTION

Public and private sector deposits have been the main sources of deposit takings of most deposit money banks in Nigeria. These sources constitute the bulk of assets of the DMBs, which are either utilized or kept traditionally as just mere custodians for bank customers. With the introduction of the treasury single account (TSA) policy of the Nigerian government, all public sector funds are expected to be remitted to the treasury single account maintained by Central Bank of Nigeria (Ogbonna & Ojeaburu, 2015). With this development, deposit money banks (DMB) are only left with deposits, largely from the private sector, in the form of Demand, savings, time and or foreign deposits, which constitute part of the non-current assets of DMBs in Nigeria. Before the introduction of the TSA in 2003, most deposit money banks relied on deposits from government agencies, ministries and departments. The banks found it difficult to mobilize deposits; rather they did more of arm- chair banking (Ezinando, 2020).

The idea of banking practices, including deposits is as old as the oldest sources of legal knowledge. The basis for banking enterprises were, deposit activities and money trading, followed by the instruments of granting loans and lodgements are aimed at making earning returns. Entities engaged in primary forms of banking performed their services, including receiving and entrusting capital with compulsory returns, regardless of the form of capital. Banking activities started some centuries ago, its traces, can be found in Egyptian civilization (Morawski, 2002).

The argument of Miklinski (2021) was emphatic; he maintained that the wide acceptance of funds by modern banks, within the framework of legal relationship of bank account, was part of the historical forms of banking activities.

Kanu (2016) asserts that previously, public sector funds like the NNPC funds, deposited into different DMBs, thus formed high liquidity. However, with the current federal government policy on treasury single account (TSA), the total deposits of DMBs would be affected when such high revenue generating government agencies, pools its funds out of the banks. The banks would have to

rely on only private sector deposits to earn returns on investments. From the forgoing it has become imperative to ascertain the relationship amid private sector deposits (assets) and performance.

The intermediation function of DMBs remains a strategic aspect of deposit mobilization from surplus unit to deficit units of the economy; this practice by banks is aimed at increasing the performance of banks (Mohammed, 2012). Okoye & Eze (2013) also decried that DMBs survives by mobilizing savings and extend loans to bank customers with the desire to increase performance. Note that, savings are source of funds with low-interest cost (Bass & Henderson, 2000).

In the words of Alexiou & Sofoklis (2009), there seems to be a consensus that bank profitability is directly related to the quality of assets in the financial position of an entity. Poor credit quality has a negative effect on bank profitability, while good credit quality would have a positive effect on bank profitability. These assertions show that demand deposits, time deposits and savings deposit which are all current asset items are related either positively or negatively. Demand deposits are deposits redeemable on notice; the main component of demand deposits is current accounts and are driven by low rates of interests. Demand deposits constitute a major source of stable funding for banks, especially current accounts. The fact that these deposits are redeemable on notice means that a client has an option to withdraw deposit on demand, and the legal duration is one day. The banks have option to change the demand deposit rate as it wishes, thus demand deposits, are subject to embedded options. These options make risk management of demand deposits difficult. Savings deposits are savings instruments and not transactionary. Thus, savings deposits are less stable source of funding for banks.Deposit money banks traditionally trades with money, with the objective of maximising profits by investing its resources in investments which would yield returns on assets and overall performance of the banks.

One of the factors that can increase or decrease the performance of any bank is the volume and availability of deposits, as the profitability of the banks is the main reason of their existence, (Haddaweea & Flayyihb, 2020).

2. LITERATURE REVIEW

2.1 Conceptual review

2.1.1. Demand deposits

Demand deposits are checking accounts, where a customer is allowed to put money into the account or take money out of the account at any time, without penalty (Gran & Daphne, 2021). The account allows one to withdraw money from the account on demand, at any time. Thus, the money in a demand deposit account is generally considered to be liquid or is equivalent to ready cash. Gren & Daphne (2021) further stated that some banks can charge a fee if certain excess withdrawals from the account are made, generally the accounts are intended to allow the bank customer to access money on demand based on the financial needs and goals.

Nathanael (2014) asserted that deposit mobilization is the most important function of commercial banks as their existence depends on the amount of deposits mobilized.

2.1.1.1 Features of demand deposit

- Does not pay high rate of interest
- Withdrawals can be done on demand

2.1. I.I.I Time deposits

Time or term deposits, require bank customers to deposit their money for a specific period of time. This type of deposits can be kept for a specific term of months or years. Some banks call these deposits as certificate of deposit. A time deposit or certificate of deposit with a 12- month's term would require the customer to leave the money in the account until the time deposit matures. Penalties are often charged for early withdrawals of money before the maturity period of time deposits (Gren & Daphne, 2021). Time deposit also earns interest, which is often fixed for a given period of time and is payable upon maturity, some could be paid periodically in the course of the term especially with long term deposits, the longer the term and deposit amount, the higher the interest rates offered, (Sumant, 2007)

2.1. IV. Features of Time deposits

- Deposits can be kept for an agreed period of time
- Has an agreed maturity period

2.1. V. Savings deposits

The Collin's dictionary of banking and finance defined savings deposits as an account in which money is kept regularly to earn interest. Savings deposits are interest bearing deposits account held at a bank. These accounts pay a modest interest rate and the account is safe and reliable option for short –term cash needs. Savings deposit accounts have some constraints on how often

funds can be withdrawn, however offers flexibility for building emergency funds. It is important to note that savings deposits are important sources of funds that financial institutions use for loans (Kagan 2022).

In the thoughts of Bikker & Gerritsen (2018) savings deposits is an agreement amid a bank customer and a deposit money bank, in return for interest as long as the customer has the right to withdraw without prior notice.

The savings account interest rate varies; deposit money banks can change their rates at any time. With the savings account, money can be transferred in or out of the savings account online at a branch or ATM, by electronic transfer or direct deposits and withdrawals.

2.1. VI. Features of savings deposit;

- Funds are kept safe
- It earns interest
- Access to funds remains liquid
- Does not pay higher interest like time deposit account
- Easy to access and easy to make withdrawals.

2. 2. Return on Assets

Susan & Belverd (2008) defined return on assets as a performance measure that shows the percentage of profitability which an entity's assets can earn income over a certain period of time. They asserted that return on assets (ROA) gives an indication of the capital intensity of the company, which relies on the industry. The expression below shows the computation of return on assets;

$$ROA = \frac{\text{Net Income}}{\text{Average total Asset}}$$

From the above mathematical expression, the ROA as a measure of performance is actually a ratio of net income or net profit over the total assets of a business entity. Thus the term also refers to a financial ratio which indicates how profitable an organisation is in relation to its total assets. Investors, bank managements and analysts can use ROA to find out how efficient a bank, or firm uses its assets to generate income, revenue or profit (Hargrave, 2022). Most analysts according to Hargrave (2022) argued that the basic ROA formular is limited in its applications, being most suitable for banks. The deposit money banks statements of financial position better represent the real value of assets and liabilities due to the fact that they are carried at their market value. Return on asset is a measure of how efficient companies use its assets to generate profits. It compares the value of a business assets with the profits it produces over a period of time, it is also used to know how effective business entities uses resources to make profit and for business survival (Emily & Benjamin, 2021)

2.2. I Relationship amid Savings Deposits and Performance of DMBs

The study by Haddaweea & Flayyihb, (2020) revealed that relationship exists amid deposits of all kinds and indicators of bank's profitability. The discovery which was made at Jordan, clearly showed that, savings deposits was the biggest contributor to performance of banks in Jordan.

2.2. II Relationship amid Demand Deposits and Performance of DMBs

The relationship amid demand deposits and performance has been viewed from different indicators of banks performance. Demand deposits was revealed to have a negative relationship with return on equity, while other classes of deposits such as savings, time and foreign currency deposits had positive relationship with return on equity. These were the views of Joseph & Sinamina (2019)

2.2. III Relationship amid Time Deposits and Performance of DMBs

As earlier discussed, time deposits are one of the major sources of liquidity of deposit money banks in Nigeria. The time or term deposit is an interest bearing account that has a defined term to maturity. The longer the time to maturity, the higher the interest payment, this improves the performance of DMBs and vice versa. A vertical relationship exists amid time deposits and performance of DMBs. An increase in time deposits would lead to increase in performance. Helms, (2006) submitted that, deposits (time deposits) are viewed as less expensive alternative funding and as such deposits are deemed to bring down the cost of operations in the process increasing performance.

2.3 Theories of Bank Deposits

2.3. I Credit creation theories

This theory holds that individual banks can create money and banks do not solely lend out deposit that have been provided to the bank, instead the banks creates bank deposits as a consequence of bank lending. Consequently the amount of money a bank can

create is not constrained by their deposit takings activities and the act of bank lending creates new purchasing power that did not previously exists (Mcleay, Radia & Thomas, 2014).

2.3. II Theory of Deposit Expansion

Pennington, (1963) advanced the theory of deposit expansion theory by contending that with fractional reserve, bank cash deposits, produces excess reserves. Secondly, such excess reserve leads to loans, and that the proceeds of the loans when re-deposited in the system augment the volume of deposits. He further explained that, if banks receive cash deposits, half would be held in reserve, the other half would be used for purchasing earnings yielding assets such as loans and investments. The sellers of these assets upon receiving the cash redeposit it in their banks, thereby increasing the volume of deposits.

2.4 Empirical Review

The study by Joseph & Sinamina, (2019) on deposit composition of deposit money banks and return on equity in Nigeria. The study used the multiple regression method with the aid of e-views to analyze the data. The result showed that time, savings, demand, and foreign deposits influences the profitability of deposit money banks in Nigeria. The result also showed that demand deposit has a negative relationship with return on equity, while time, savings and foreign currency deposits had a positive relationship with return on equity of deposit money banks in Nigeria.

Ama, Ruwini, Madhushika, Parami, & Dulanjan, (2018) discovered in their study on the effects of level of deposits on financial performance - A study on listed commercial banks in Sri Lanka. A positive and significant relationship was found amid savings deposits, fixed deposits and demand deposits on Return on Assets and Return on Equity of DMBs.

In their study, Gul, Irshad & Zaman, (2011) investigated the impact of assets, loans, equity, deposits and market capitalization on profitability. Their findings revealed that banks deposits have positive correlation with ROA and ROE.

Demirguc, Kunt & Huzinga (1999) in their study on Determinants of commercial banks interest margins and Profitability. They investigated the determinants of commercial banks interest's margins and profitability using bank data from 80 countries for the period 1988-1995. Their results showed that banks that rely largely on deposits for their funding were less

Profitable as deposits mobilization requires more branches and additional expenses.

Habtamu(2021), studied the determinants of deposit growth in commercial banks in Ethiopia. The study used fixed effect panel data estimation technique to analyze the data from 2010 to 2019. The result showed that branch expansion, bank size broad money supply has a positive and significant effect on deposit growth of commercial banks in Ethiopia.

Aderigha & Takon, (2022) in their study on Market power of deposit money banks and economic growth in Nigeria for the period 1981-2020 revealed after using ARDL and bounds test statistic to regress the equation, that at short run savings rate has a positive relationship with gross domestic product.

Ameerh & Hakeem (2020) in their study on "The Relationship between Bank Deposits and Profitability for Commercial Banks" the study was conducted at Jordan for the period 2012 to 2016. The study which estimated using regression analysis revealed that, there is a significant relationship between deposits and ROE and ROA of Jordanian banks.

Naceur & Goiaed (2001) investigated the determinants of Tunisian Bank's performance. The study which covered the period 1980 to 1995, with return on assets as the measure for performance, the researchers used regression analysis to analyze the data. The result indicated that banks with higher level of deposit compared to their assets are the banks with better performance.

Dietrich & Wanzeried (2009) had found no empirical evidence that commercial banks in Switzerland had the ability to convert more deposits liabilities into higher income earnings and assets.

Anila (2022), discovered in the study on determinants of bank deposits in Albania. The used ordinary least square regression analysis to analyze the data between 2009 and 2020. The result revealed that capital adequacy, profitability and remittances substantially impacted bank deposits.

3. METHODOLOGY

This section of the study exposes the research methodology used to arrive at the results. It contains data collection, design, model specification and preliminary tests that were conducted.

3.1 Research design

The nature of the design of this study is quantitative. It was meant to analyze the data on the relationship amid Private sector deposits and performance of deposit money banks in Nigeria. The study identified three variables for private sector deposits; savings deposits (SD), time deposits (TD) and demand deposits (DD) while return on assets (ROA) was proxy for performance of deposit money banks in Nigeria.

3.2 Data collection

The data for this research was sourced from the website of Central Bank of Nigeria statistical bulletin and annual report of NDIC which was obtained from their website, from 1990-2019.

3.3 Data analysis technique

Different statistical tools of analysis are available in the field of statistics. Econometric tools which is one of them, deals with the measurement of economic relationships. Frisch and Bjerkholt, (1995) asserts that, econometric tools aims to give empirical content to economic relations for testing economic theories, forecasting, policy evaluation and decision making. Econometrics was also defined as deriving econometric relations, just by applying statistical and mathematical methods to analyze data. It gives a guide to analyzing the impact of testing an existing phenomenon and testing hypothesis (gementstudyguide.com).

The nature of the data is time series, and would be analyzed using the econometrics statistical tools. Thus, the e-views 10 version will be used as the software to run and estimate the equation for the model.

3.4 Model Specification

Model specification is often viewed as a mathematical expression used to measure the economic relationship between variables (dependent and independent variables). In this case, we specify a functional and econometric models for the dependent and independent variables of the study.

ROA= f(SD, DD,TD,)……..(1)

Assuming a linear relationship amongst the variables, the econometric relationship of the functional form is written as follows;

ROA= β0 + β1SD + β2DD + β3TD +U……. (2)

Where:

ROA= Return on assets

SD= Savings deposit

DD= Demand deposit

TD= Time deposit

U= stochastic error term

B0, = constant

b1, b2, b3, = coefficients and parameters to be estimated

3.5 Pre-Test

The following pre-test were conducted to establish the validity and global acceptability of the variables that would be utilized for the selection of the model.

3.5.1 Test for stationarity (Unit Root test)

The test for stationarity of data is one of the assumptions considered while analyzing an econometric model. The result of the unit root test would show direction of stationarity either at levels i.e. order zero i(0), first difference i.e. i(1) or a mixed order of integration i(0) and i(1). The outcome of the pre-test would reveal the statistical tool that would be applied to estimate the equation which would also reveal the hypothesis to be accepted or rejected.

The short-run tests, long-run tests, autocorrelation test and granger causality tests would be conducted.

The tests would show the short run and long run relationship between two or more co-integrating variables in the estimated equation.

4. ANALYSIS AND RESULTS

4.1 Test for stationarity (Unit Root Test)

This study chose Augmented Dickey-Fuller (ADF) test statistic to test for the stationarity of the data. The following results were obtained from e-views 10 version. The ADF results below shows the unit root results of the dependent and independent variables. ROA, DD and SD were all stationary at levels i(0) while TD was stationary at first difference i(1). This result shows a mixed order of integration, therefore the Auto Regressive Distributed Lag (ARDL) test statistic would be used to estimate the equation.

Table 1. Results of the Augmented Dickey-Fuller Unit Root

VARIABLES	ADF TEST STATISTIC AT		CRITICAL VALUES	ORDER OF INTEGRATION
	LEVEL	1ST DIFF		
ROA	-6.109351		-3.689194 -2.971853 -2.625121	1 (0)
SD	-3.095882		-3..679322 -2.967767 -2.622989	1 (0)
DD	-3.502590 (Prob 0.0152)		-3.679322 -2.967767 -2.622989	1 (0)
TD		-6.222588	-3.689194 -2.971853 -2.625121	1(1)

Significance at 10%, Significance at 5%, Significance at 1%.

4.2 Interpretation of Results

The results above shows the augmented dickey fuller test, ROA, SD, and DD are all stationary at levels i (0) while TD was stationary at first difference, i(1). With this outcome, the regression equation would be estimated using the autoregressive distributed lag due to the mixed order of integration.

4.2.1 Interpretation of Result (Auto Regressive Distributed Lag (ARDL) test results

The table below shows the test result obtained from the e-views 10 software which reveals the short run relationship amid the dependent variable and the independent variables.

Table 2. Showing ARDL result

Dependent Variable: ROA				
Method: ARDL				
Date: 01/30/08 Time: 00:29				
Sample (adjusted): 1994 2019				
Included observations: 26 after adjustments				
Maximum dependent lags: 4 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (4 lags, automatic): LDD LSD LTD				
Fixed regressors: C				
Number of models evalulated: 500				
Selected Model: ARDL(4, 3, 4, 4)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ROA(-1)	0.381110	0.179615	2.121810	0.0715
ROA(-2)	0.257594	0.177556	1.450782	0.1901
ROA(-3)	-0.342934	0.189031	-1.814165	0.1125
ROA(-4)	-0.353361	0.121233	-2.914727	0.0225
LDD	-10.61277	3.765987	-2.818057	0.0258
LDD(-1)	12.37494	4.064306	3.044785	0.0187
LDD(-2)	-9.304989	4.056983	-2.293574	0.0555
LDD(-3)	3.443468	3.316128	1.038400	0.3336

LSD	4.369576	5.071537	0.861588	0.4174
LSD(-1)	-3.597718	4.923766	-0.730684	0.4887
LSD(-2)	-1.029621	5.377139	-0.191481	0.8536
LSD(-3)	7.023211	5.648027	1.243481	0.2537
LSD(-4)	-9.147782	3.916767	-2.335544	0.0522
LTD	6.560751	1.884093	3.482181	0.0102
LTD(-1)	-2.380992	2.230689	-1.067380	0.3212
LTD(-2)	-2.063714	1.343148	-1.536476	0.1683
LTD(-3)	1.200895	1.632417	0.735655	0.4859
LTD(-4)	2.112413	1.833716	1.151985	0.2871
C	9.784521	10.05084	0.973502	0.3627
R-squared	0.927275	Mean dependent var		2.841154
Adjusted R-squared	0.740269	S.D. dependent var		1.817139
S.E. of regression	0.926083	Akaike info criterion		2.833646
Sum squared resid	6.003405	Schwarz criterion		3.753024
Log likelihood	-17.83739	Hannan-Quinn criter.		3.098393
F-statistic	4.958531	Durbin-Watson stat		2.328514
Prob(F-statistic)	0.019097			
*Note: p-values and any subsequent tests do not account for model selection				

(**Source:** e-views 10 ARDL result)

4.2.2 Interpretation of Results

Table two, above shows R-squared at 92.72%, while the adjusted R-squared has 74.02%, the probability value is 0.019097. The implication of the short run ARDL result means that at short run, all the independent variables predict the movement of the dependent variable at 92.72% as the probability value of 0.01907 is less than the critical value of 5%. Thus the null hypothesis is rejected. All independent variables viz; demand deposits, savings deposits, time deposits are best fits that can predict the direction of ROA. At lags 1 and 3, DD has a positive relationship with ROA with the values 12.37494 and 3.443468 respectively. Hence a 1% increase in demand deposit would lead to 12.37494 and 3.443468 increase in Return on Asset at 5% level of significance. At lag 2 however, a negative relationship of -9.304989 was noticed amid demand deposits and return on assets. Thus a 1% increase in demand deposits leads to -9.304989 percent decreases in return on assets. The result also shows that at lags 1 and 2, a significant and positive relationship was found amid demand deposits and return on assets. At lag 3, the result indicates that demand deposit does not significantly relate with return on assets at 5% level of significance.

At lags 1, 2, & 4, negative signs of -3.597718, -1.029621 and -9.147782 respectively were observed amid savings deposits and return on assets. An indication that, at short run period, a 1% increase in savings deposit, return on assets reduces by -3.597718, -1.029621 and -9.147782 at those lag periods respectively. At same lag periods, significant relationship was not found amid the variables, as all the values were all greater than the critical level of 5%.

At lags 1 & 2, time deposits had a negative relationship with return on assets, with the following values -2.380992 and -2.063714 respectively. Implying that a 1% increase in time deposits would result to a -2.380992 and -2.063714 decrease in return on assets of all Deposit Money Banks in Nigeria. At lags 3 & 4 positive signs were observed, 1.200895 and 2.112413. An indication that a 1% increase in time deposit leads to 1.200895 and 2.112413 increase in return on assets. However, the probability values at lags 1, 2,3,& 4 does not significantly influence return on assets at the short run period.

4.2.3 Long Run Bounds Test Result

Table 3. Bounds test result

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	3.785135	10%	2.37	3.2
K	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

The long run bounds test result as shown in table 3 revealed an F –statistic value of 3.785135 which is greater than the upper bound of 3.67 at 5% level of significance. The null hypothesis is rejected at 5% level, and we conclude that there is a long run relationship between all the independent variables; demand deposit, savings deposits, and time deposits and return on assets of deposit money banks in Nigeria for the period studied. The difference between the f-statistic value and significant level is minimal, hence a weak long run relationship.

4.2.4 Autocorrelation- Durbin Watson

The Durbin Watson result shows a 2.328514 value; this means that there is absence of autocorrelation in the data. Thus, meeting the global criteria for the test of the presence of autocorrelation as one of the regression assumptions.

4.2.5 Granger Causality Test Result

Table 4. Granger causality

Pairwise Granger Causality Tests			
Date: 09/15/22 Time: 16:55			
Sample: 1990 2019			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
LDD does not Granger Cause ROA	28	1.82358	0.1840
ROA does not Granger Cause LDD		0.03587	0.9648
LSD does not Granger Cause ROA	28	0.84709	0.4416
ROA does not Granger Cause LSD		1.17072	0.3280
LTD does not Granger Cause ROA	28	0.20917	0.8128
ROA does not Granger Cause LTD		2.10307	0.1449
LSD does not Granger Cause LDD	28	0.25078	0.7803
LDD does not Granger Cause LSD		1.27137	0.2994
LTD does not Granger Cause LDD	28	0.68068	0.5162
LDD does not Granger Cause LTD		9.81638	0.0008
LTD does not Granger Cause LSD	28	2.72804	0.0865
LSD does not Granger Cause LTD		0.35474	0.7051

The granger causality results above show that causality does not run amid ROA and the explanatory variables. However, causality was only found amid demand deposits and time deposit. This implies that at 5% level of significance, the null hypothesis is rejected.

4. DISCUSSION OF FINDINGS

The results so far have revealed the direction of the study on whether to accept or reject the null hypothesis. At short run all the predictor variables (DD, SD and TD) were seen to predict the direction of return on assets of deposit money banks in Nigeria for the period. It was also observed that at short run, demand deposits, savings deposits and time deposits grossly negatively influence return on assets of deposit money banks in Nigeria for the period reviewed. Implying that a 1% increase in demand deposits, savings deposits and time deposits leads to negative return on assets. At short run, demand deposits significantly predict return on assets at lags 1 and 2, however, savings deposits and time deposits does not significantly predict the movement of Return on Assets for the period reviewed. An indication that savings deposits, demand deposits and time deposits grossly, does not significantly influence return on assets. The long run positions also show that demand deposits, savings deposits and time deposits has a positive relationship with return on assets for the period studied. Although the long run relationship was marginal, the evidence from the empirical study shows that at long run, relationship exists amid demand deposits, savings deposits and time deposits for the period reviewed.

This result aligns with credit creation theory which argued that individual banks can create money, and that the banks do not solely lend out deposits that have been provided to the bank. Instead the banks create money as a consequence of bank lending. Thus the amount of money the banks create is not constrained by their deposit takings (Mcleay,Radia &Thomas, 2014).

The result also agrees with the study by Dietrich & Wanzeried (2011) where it was found in Switzerland that no empirical evidence was established that banks had the ability to convert more deposits into higher income earnings. However, the study by Naceur & Goiaed (2001) investigated the determinants of Tunisian Bank's performance. The study which covered the period 1980 to 1995, with return on assets as the measure for performance, the researchers used regression analysis to analyze the data. The result indicated that banks with higher level of deposit compared to their assets are the banks with better performance.

In this current study, causality was not also discovered amid demand deposits, savings deposits and time deposits and the return on assets. However, demand deposits and time deposits had unidirectional causality amidst themselves.

Our findings have shown that cash deposits by bank customers in the form of demand, savings and time deposits do not on their own relates to performance by banks in Nigeria for the reviewed period. Deposit money banks in Nigeria are expected to use deposits in their custody for investments that would yield positive returns for the survival of banks in Nigeria.

5. CONCLUSION

We have examined the relationship amid private sector deposits and performance of deposit Money Banks in Nigeria. We proxied private sector deposits with demand deposits, savings deposits and time deposits while performance was proxied with Return on Assets for the period 1990-2019. The study revealed that at short run periods, demand, savings and time deposits had negative relationship with Return on Assets. Long run relationship was however discovered amid the variables, though marginal. The study concluded that demand, savings and time deposits predicts the directions of return on assets of DMBs in Nigeria negatively. The granger causality test also revealed same results. This position has shown that private depositors especially demand, savings deposits that make withdrawals at short notices, such deposits cannot be effectively used to create additional income or earnings for deposit money banks in Nigeria. This study cannot conclude that the variables used are the only variables that can predict the movement of performance of DMBs in Nigeria. Other variables not included in the study due to statistical errors or unavailable data can be sourced, for further studies.

5.1. RECOMMENDATIONS

From the foregoing, we recommend as follows;

(i) DMBs should not rely on demand deposits, savings and time deposits as performance indicators for the financial survival of banks in Nigeria.

(ii) CBN should develop credit policies that would ensure sustainable performance and survival of DMBs in Nigeria.

(iii) Deposit mix of DMBs should be allocated to investments that would increase returns on assets.

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